New York ISO
Independent System Operator

10 Krey Boulevard, Rensselaer, NY 12144
Ph: 518.356.6000 | Fax: 518.356.8899

February 9, 2021

By Electronic Delivery

Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: New York Independent System Operator, Inc., Proposed Tariff Revisions Regarding Enhancements to Economic Planning Process; Docket No. ER21-____-000

Dear Ms. Bose:

Pursuant to Section 205 of the Federal Power Act ("FPA")[1] and Part 35 of the regulations of the Federal Energy Regulatory Commission ("Commission"),[2] the New York Independent System Operator, Inc. ("NYISO") respectfully submits proposed revisions to its Open Access Transmission Tariff ("OATT") and its Market Administration and Control Area Services Tariff ("Services Tariff") to enhance the Economic Planning Process component of its Comprehensive System Planning Process.[3]

The NYISO's proposed tariff revisions to its Economic Planning Process will enable the NYISO to provide more comprehensive and useful information concerning the current and projected state of the New York State Transmission System across a twenty-year time horizon, including evaluating potential congested elements of the transmission system and assessing the benefits of addressing the identified congestion. The proposed tariff revisions also include enhancements and clarifications to the three separate study components that constitute the Economic Planning Process. The revised Economic Planning Process will provide additional analysis and valuable insights concerning New York State's transmission needs and the energy deliverability of future generation resources that will better position Market Participants, Developers, policymakers, and other interested parties to meet New York State's transmission infrastructure needs and support the state's climate change protection goals.

The NYISO's stakeholder Management Committee approved the tariff changes unanimously, and the NYISO's Board of Directors approved the tariff changes for filing with the Commission. The NYISO respectfully requests that the tariff revisions proposed in this filing become effective the day immediately following the end of the statutory sixty-day notice period under FPA Section 205 (*i.e.*, April 11, 2021). Upon acceptance by the Commission, the NYISO

[1] 16 U.S.C. § 824d.
[2] 18 C.F.R. § 35.13 (2019).
[3] Capitalized terms that are not defined in this filing letter shall have the meaning specified in Attachment Y of the OATT, and, if not defined therein, in the OATT or the Services Tariff.

will apply the tariff changes in the next cycle of its Economic Planning Process, which will commence this spring.

I. LIST OF DOCUMENTS SUBMITTED

The NYISO submits the following documents with this filing letter:

1. Affidavit of Zachary G. Smith, NYISO Vice President, System & Resource Planning (Attachment I);
2. A clean version of the proposed revision to the OATT (Attachment II);
3. A blacklined version of the proposed revisions to the OATT (Attachment III);
4. A clean version of the proposed revisions to the Services Tariff (Attachment IV); and
5. A blacklined version of the proposed revisions to the Services Tariff (Attachment V).

II. COMMUNICATIONS AND CORRESPONDENCE[4]

Communications regarding this filing should be directed to:

Robert F. Fernandez, Executive Vice President and General Counsel
Karen Georgenson Gach, Deputy General Counsel
Raymond Stalter, Director of Regulatory Affairs
* Carl F. Patka, Assistant General Counsel
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, NY 12144
Tel: (518) 356-6000
Fax: (518) 356-4702
rfernandez@nyiso.com
kgach@nyiso.com
rstalter@nyiso.com
cpatka@nyiso.com

* Ted J. Murphy
Hunton Andrews Kurth LLP
2200 Pennsylvania Avenue, NW
Washington, D.C. 20037
Tel: (202) 955-1500
Fax: (202) 778-2201
tmurphy@huntonak.com

* Michael J. Messonnier Jr.
Sevren R. Gourley
Hunton Andrews Kurth LLP
951 East Byrd Street
Richmond, VA 23219
Tel: (804) 788-8200
Fax: (804) 344-7999
mmessonnier@huntonak.com
sgourley@huntonak.com

*Designated to receive service.

[4] The NYISO respectfully requests waiver of 18 C.F.R. § 385.203(b)(3) to permit service on counsel in both Washington, D.C. and Richmond, VA.

III. BACKGROUND

The NYISO's Comprehensive System Planning Process is composed of four components: the Local Transmission Owner Planning Process, the Reliability Planning Process, the Economic Planning Process, and the Public Policy Transmission Planning Process. The NYISO also conducts an interregional transmission planning process under a joint planning protocol with ISO New England Inc. ("ISO-NE") and PJM Interconnection, L.L.C. ("PJM"), through which interregional projects may be considered in the NYISO's regional reliability, economic and public policy processes.[5]

The NYISO first developed the Economic Planning Process component in 2007 to address the Commission's directives in Order No. 890 concerning economic planning studies.[6] The Commission accepted the Economic Planning Process as compliant with the Order No. 890 transmission planning principles.[7] The NYISO made additional, limited revisions to the Economic Planning Process in response to Order No. 1000.[8] The Commission accepted the Economic Planning Process as compliant with the Order No. 1000 requirements.[9]

---

[5] *See* Amended and Restated Northeastern ISO/RTO Planning Coordination Protocol (July 13, 2015), https://www.nyiso.com/documents/20142/1406358/Northeast_Planning_Protocol_FINAL_SIGNED_VERSION.pdf/8471488b-2e9e-5060-7c04-4168e86e69b4; *see also* 2020 Northeast Coordinated System Plan (April 28, 2020) posted at: https://www.nyiso.com/documents/20142/1406358/2019-ncsp-fina-PJM-NYISO-ISO-NE-2020-04-28.pdf/5706af3f-1f87-d5ae-0a49-fadfc33c5663.

[6] *Preventing Undue Discrimination and Preference in Transmission Service,* Order No. 890, FERC Stats. & Regs. ¶ 31,241, order on reh'g, Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 (2007), order on reh'g, Order No. 890-B, 123 FERC ¶ 61,299 (2008), order on reh'g, Order No. 890-C, 126 FERC ¶ 61,228 (2009), order on clarification, Order No. 890-D, 129 FERC ¶ 61,126 (2009).

[7] *See New York Independent System Operator, Inc.*, 125 FERC ¶ 61,068 (2008), *reh'g,* 126 FERC ¶ 61,320 (2009), *reh'g denied,* 129 FERC ¶ 61,045 (2009); *New York Independent System Operator, Inc.*, 129 FERC ¶ 61,044 (2009); *New York Independent System Operator, Inc.*, 132 FERC ¶ 61,028 (2010); *New York Independent System Operator, Inc.*, 132 FERC ¶ 61,188 (2010); *New York Independent System Operator, Inc.*, Letter Order, Docket No. ER10-2459-000 (issued October 26, 2010).

[8] *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, FERC Stats. & Regs. ¶ 31,323 (2011), *order on reh'g*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh'g*, Order No. 1000-B, 141 FERC ¶ 61,044 (2012), *aff'd sub nom. S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. 2014).

[9] *New York Independent System Operator, Inc.*, Order on Compliance, 143 FERC ¶ 61,059 (2013); *New York Independent System Operator, Inc.*, Order on Rehearing and Compliance, 148 FERC ¶ 61,044 (2014); *New York Independent System Operator, Inc.*, Order on Rehearing and Compliance, 151 FERC ¶ 61,040 (2015); *New York Independent System Operator, Inc.*, Order Conditionally Accepting Tariff Revisions and Requiring Further Compliance, 153 FERC ¶ 61,341 (2015); *New York Independent System Operator, Inc.*, Order Conditionally Accepting Tariff Revisions and Requiring Further Compliance, 162 FERC ¶ 61,107 (2018); *New York Independent System Operator, Inc.*, Order Granting, in Part, and Denying, in Part, Rehearing and Clarification, and Requiring Further Compliance, 162 FERC ¶ 61,124 (2018); *New York Independent System Operator, Inc.*, Letter Order, Docket Nos. ER13-102- 012, 013, and 014 (June 5, 2018); *New York Independent System Operator, Inc.*, Letter Order, Docket No. ER13-102-015 (August 21, 2018).

A. The NYISO's Current Economic Planning Process

The Economic Planning Process consists of three separate study processes: (i) the Congestion Assessment and Resource Integration Study ("CARIS") Phase 1 that examines transmission system congestion on the New York system; (ii) the CARIS Phase 2 for consideration of proposed regulated economic transmission projects to address transmission system congestion, and (iii) an optional Additional CARIS Study through which interested parties can obtain studies of system congestion and potential solutions. The Economic Planning Process requirements are primarily located in Sections 31.1, 31.3, and 31.5 of Attachment Y to the OATT.

The NYISO performs the CARIS Phase 1 study on a biennial basis. The NYISO, in collaboration with its stakeholders and other interested parties, develops a ten-year base case projection of congestion together with historic congestion.[10] The study assumes a reliable system throughout the study period based on the outcome and solutions identified and needed in the Reliability Planning Process.[11] The NYISO then identifies, ranks, and groups the most congested elements on the New York State Bulk Power Transmission Facilities ("BPTF").[12] The NYISO performs studies for the top three congested elements.[13] As part of the Comprehensive System Planning Process, CARIS synchronizes the study assumptions with other planning processes, but then is developed independently within the Economic Planning Process. These studies include developing generic solutions (*i.e.*, transmission, generation, energy efficiency, and demand response) that are evaluated to determine their impact on the congested elements.[14]

The primary metric for assessing the benefits and costs of each generic solution is projected New York Control Area ("NYCA")-wide production costs savings.[15] The NYISO also uses additional metrics to measure project benefits, including Locational-Based Marginal Pricing ("LBMP") load costs, marginal loss payments, generator payments, Transmission Congestion Contract ("TCC") payments, emission allowance costs, and installed capacity ("ICAP") savings. These metrics are compared to generic estimated project costs developed by the NYISO to determine potential benefits on a net present-value basis.[16] The NYISO also performs scenario analysis to identify factors that could impact the congestion in the base case. These factors include, but are not limited to, load forecast uncertainty, fuel price uncertainty, new resources, generator retirements, emission data, the cost of emissions allowances, environmental requirements, energy efficiency mandates, and overall resource requirements.[17]

---

[10] OATT § 31.3.1.3.1.
[11] OATT § 31.3.1.3.2.
[12] The New York State Bulk Power Transmission Facilities generally consist of facilities of 230 kV voltage and higher, and are "identified in the annual Area Transmission Review submitted to [the Northeast Power Coordinating Council] NPCC by the ISO pursuant to NPCC requirements." OATT § 31.1.1.
[13] OATT § 31.3.1.1.
[14] OATT § 31.3.1.3.3.
[15] OATT § 31.3.1.3.4.
[16] OATT § 31.3.1.3.5.
[17] OATT § 31.3.1.5.

The NYISO provides a draft CARIS Phase 1 Report to stakeholders for their review and comment, and then for review and action by the shared governance Business Issues Committee and Management Committee.[18] The CARIS Phase 1 Report is then submitted to the NYISO Board of Directors for its review, action, and approval.[19] The CARIS Phase 1 Report is concurrently submitted to the NYISO's Market Monitoring Unit for its review and consideration.[20] Upon Board approval, the NYISO posts the final report on its website.[21] The NYISO further conducts a public information session for Market Participants and other potentially interested parties to understand and discuss the final CARIS Phase 1 Report.[22]

At the request of a Market Participant or other interested party, the NYISO may separately perform an Additional CARIS Study at any time at the requesting party's expense. The NYISO posts all requests for Additional CARIS Studies on its website.[23] The procedures for requesting an Additional CARIS Study, and the related request form and *pro forma* Additional CARIS Study Agreement, are currently located in the NYISO's Economic Planning Process Manual.[24] The NYISO will hold a scoping meeting with the requesting party to determine and customize the scope of the study, including the assumptions and scenarios that will be used, any additional metrics for measuring congestion and the benefits of relieving congestion, potential solutions to address the congestion, and the degree of certainty concerning the solution's cost estimates. The NYISO and requesting party memorialize the scope of the Additional CARIS Study in an Additional CARIS Study Agreement. The NYISO then conducts the study and provides the requesting party with the study results and report on a confidential basis, with certain exceptions for disclosure such as a party utilizing the study to seek cost allocation or cost recovery through the NYISO OATT.

The NYISO's Economic Planning Process is consistent with its philosophy that solutions to transmission needs should primarily be met by market-based solutions that do not rely on the NYISO's tariffs for cost allocation and recovery but instead, respond to price signals for the economic relief of congestion in the NYCA. The NYISO provides information in its studies to facilitate the development of market-based solutions of all solution types (*i.e.*, transmission, generation, demand response, energy efficiency) to address congestion. The Economic Planning Process does not mandate the construction or funding of transmission projects to address congestion. Nevertheless, a Developer may propose a transmission project to address congestion

[18] OATT § 31.3.2.1.
[19] OATT § 31.3.2.2.
[20] *Id.*
[21] *Id.*
[22] OATT § 31.3.2.3.
[23] OATT § 31.3.1.2.3.
[24] *See* Economic Planning Process Manual - Congestion Assessment and Resource Integration Studies (CARIS), Section 4, Additional CARIS Studies, Appendix B (Request Form), and Appendix C (Agreement Form), posted at: https://www.nyiso.com/documents/20142/2924447/epp_caris_mnl.pdf/6510ece7-e0a6-7bee-e776-694abf264bae

identified in the CARIS Phase 1 study or in an Additional CARIS Study and may seek to allocate and recover the costs of its project through the NYISO OATT.[25]

If a Developer proposes a transmission project, the NYISO will evaluate the project proposal in its CARIS Phase 2 process.[26] An Interregional Transmission Project is eligible to be considered in lieu of a regional regulated economic transmission project for cost allocation and cost recovery.[27] The NYISO will first perform a benefit/cost analysis concerning the transmission project.[28] The primary benefit metric will be the present value of net NYCA production cost savings.[29] For information purposes, the NYISO will also perform further analysis of the benefits of relieving congestion using additional metrics, including LBMP load costs, changes to generator payments, and ICAP savings, and will consider the development of scenarios, including fuel and load forecast uncertainty, energy efficiency programs and emission costs.[30] In order to be eligible for cost allocation and recovery of an economic transmission project through the NYISO OATT, the benefits of the proposed transmission project must exceed its costs measured over the first ten years from its proposed commercial operation, the total capital cost of the transmission project must exceed $25 million, and the Developer must obtain an approval vote from a super-majority of the beneficiary Load Serving Entities that will pay for the transmission project.[31] The NYISO will identify the Load Serving Entities that benefit from the project based on their net zonal LBMP cost savings associated with the project.[32] A Developer may allocate and recover its transmission project costs through the OATT if 80 percent or more of the identified beneficiary Load Serving Entities vote in favor of implementing the project.[33]

B. Development of Tariff Revisions to Economic Planning Process

The NYISO continually reviews the different components of its Comprehensive System Planning Process, both internally and with its stakeholders, to identify "lessons learned" and to develop process enhancements.[34] In 2020, the NYISO undertook a comprehensive review of its

[25] OATT § 31.3.2.4.
[26] OATT §§ 31.5.1, 31.5.4 and 31.5.5.
[27] OATT § 31.3.1.1.
[28] OATT § 31.5.4.3.1.
[29] OATT § 31.5.4.3.2.
[30] OATT §§ 31.5.4.3.6, 31.5.4.3.7.
[31] OATT § 31.5.4.3.3, 31.5.4.3.5.
[32] OATT § 31.5.4.4.
[33] OATT § 31.5.4.6.
[34] In 2019, the NYISO developed and the Commission accepted tariff changes to streamline and improve its Public Policy Transmission Planning Process. *See New York Independent System Operator, Inc.*, 166 FERC ¶ 61,099 (2019) (accepting clarification and enhancements to Public Policy Transmission Planning Process and additional modifications to OATT Attachment Y provisions). The NYISO also developed in 2019-2020 and the Commission accepted in 2020 tariff changes to include cost containment requirements in the NYISO's Public Policy Transmission Planning Process and tariff changes to establish a Short-Term Reliability Process to enhance reliability planning for generator deactivation and needs identified in the short-term with the Reliability Planning Process. *See New York Independent System Operator, Inc.*, 170 FERC ¶ 61,098 (2020) (accepting cost containment requirements

Economic Planning Process to determine how the studies, tools, and metrics in that process could be enhanced.

The impetus for the Economic Planning Process review arose, in part, from the rapidly shifting resource landscape in New York State toward renewable resources. The New York Climate Leadership and Community Protection Act of 2019 ("CLCPA") requires that seventy percent of energy consumed in New York State be produced by renewable resources by 2030.[35] By 2040, energy consumed must be completely emissions free.[36] The Accelerated Renewable Energy Growth and Community Benefit Act ("AREGCBA") of 2020 called for accelerated renewable resource siting and an additional statewide transmission planning study in consultation with the NYISO to achieve the CLCPA targets.[37] These state laws led the NYISO, Transmission Owners, Market Participants, Developers, policymakers, and other interested parties to examine how the NYISO's CARIS Phase I economic planning studies could be retooled and enhanced to identify the most economic and efficient locations for the construction of renewable resources, the transmission needed to deliver energy to consumers from onshore and offshore renewable resources, and the impact of the renewable resources on the New York State Transmission System. The NYISO worked with all interested parties to develop process upgrades that better position the Economic Planning Process to assist Market Participants, Developers, policymakers, and other interested parties to economically and efficiently meet the state's climate change protection goals.

At its August 20, 2020, Electric System Planning Working Group ("ESPWG") meeting, the NYISO presented stakeholders and interested parties with certain potential areas for improvement of its Economic Planning Process for their review and input. The NYISO described how the proposed planning enhancements would provide more analysis and greater insights into New York's transmission needs and the energy deliverability of future generation resources. Between August and December 2020, the NYISO refined, with stakeholder input, proposed process improvements and tariff revisions for the Economic Planning Process at eight meetings of its ESPWG and its Transmission Planning Advisory Subcommittee ("TPAS"). As discussed in Part VI below, the proposed tariff revisions concerning the Economic Planning Process were unanimously approved for filing at the Commission by the NYISO's Business Issues Committee, Management Committee, and by the NYISO Board of Directors. With the Commission's acceptance, the tariff revisions will be implemented in time for the next planning cycle of the Economic Planning Process, this spring.

---

for Public Policy Transmission Planning Process); *New York Independent System Operator, Inc.*, 171 FERC ¶ 61,082 (2020) (accepting establishment of Short-Term Reliability Process).

[35] In response, the New York Public Service Commission has revised the state's Clean Energy Standard ("CES") to include 3,000 MW of storage, 6,000 MW of solar PV installations, and 9,000 MW of offshore wind. NYPSC Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and Clean Energy Standard, Order Adopting Modifications to the Clean Energy Standard (October 15, 2020).

[36] 2019 Laws of New York, Ch. 106.

[37] 2020 Laws of N.Y. Ch. 58, Part JJJ.

IV. DESCRIPTION OF PROPOSED TARIFF REVISIONS

The NYISO proposes to revise the Economic Planning Process requirements, which are located in Sections 31.1, 31.3, and 31.5 of Attachment Y to the OATT and described below in Part IV, in four significant respects. First, the changes enhance and clarify the three study components of the Economic Planning Process; the biennial system-wide congestion study, the additional economic planning studies conducted upon request, and the studies of proposed transmission projects to address congestion that seek cost allocation and recovery through the NYISO OATT. Second, the changes expand and enhance the scope of the NYISO's biennial system-wide congestion study so that it provides more comprehensive and useful information concerning the current and projected state of the New York State Transmission System across a twenty-year time horizon, including evaluating potential congested elements of the transmission system, assessing the benefits of addressing the identified congestion, and accounting for energy deliverability of generation resources. Third, the changes incorporate into the OATT the requirements, forms, and *pro forma* study agreement for an additional economic planning study requested by any interested party. Fourth, the changes clarify and align with the other economic planning studies certain requirements for the NYISO's assessment of proposed regulated transmission solutions to address congestion.

The NYISO's proposed revisions to the Economic Planning Process are just and reasonable. They build upon the existing Economic Planning Process requirements to provide additional analysis and valuable insights concerning New York State's transmission needs and the energy deliverability of future generation resources that will better position Market Participants, Developers, policymakers, and other interested parties to meet New York State's transmission infrastructure needs and support the state's climate change protection goals. The revised Economic Planning Process continues to comply with the Commission's directives in Order Nos. 890 and 1000.

A. General Revisions the Economic Planning Process

The NYISO proposes certain tariff revisions to clarify the general requirements of the Economic Planning Process, including more clearly delineating and defining the three separate study components.

First, to align the study titles more closely with the scope and purpose of each study element as described in further detail in Parts IV.B, C, and D of this filing letter, the NYISO proposes to rename the three study components of the Economic Planning Process as follows:

- "CARIS Phase 1" or "CARIS" will be renamed the "System & Resource Outlook" (or the "Outlook" for short);
- "Additional CARIS Study" will be renamed the "Requested Economic Planning Study"; and
- "CARIS Phase 2" will be renamed the "Economic Transmission Project Evaluation."

Second, the NYISO proposes to insert a definition of the term Economic Planning Process in Section 31.1.1 of the OATT (Attachment Y Definitions) as follows, incorporating the revised study title names:

> Economic Planning Process: Pursuant to Sections 31.3 and 31.5.4 of this Attachment Y, the process by which the ISO: (i) develops the System & Resource Outlook and identifies current and future congestion on the New York State Transmission System; (ii) evaluates in an Economic Transmission Project Evaluation any Regulated Economic Transmission Project proposals to address any constraint(s) on the BPTFs identified in the Economic Planning Process, which transmission projects are eligible for cost allocation and cost recovery under the ISO OATT if approved by a vote of the project's Load Serving Entity beneficiaries; and (iii) conducts any Requested Economic Planning Studies. In conducting the process, the ISO will analyze a base case and scenarios that are developed in consultation with stakeholders.

Third, the NYISO proposes to revise the high-level summary of the Economic Planning Process in Section 31.1.4 of the OATT to use the new defined terms for the study components and to align the summary with the process revisions to these studies described below.

Finally, the NYISO proposes to clarify the timeframe for conducting the Economic Planning Process within the Comprehensive System Planning Process. The Economic Planning Process is built from the base case developed in the NYISO's reliability planning processes. Section 31.1.8.2 currently provides that the biennial economic planning study will commence upon completion of the NYISO's viability and sufficiency assessment of proposed solutions in its Reliability Planning Process. However, if no Reliability Needs are identified in the Reliability Planning Process, the NYISO will not solicit solutions and perform this viability and sufficiency assessment. In addition, the most up-to-date base case may come from either the NYISO's Reliability Planning Process or its recently enacted Short-Term Reliability Process.[38] Accordingly, the NYISO proposes to clarify in Section 31.1.8.2 that the "Economic Planning Process will commence within each two-year planning cycle using the most recent base case of the Reliability Planning Process and Short-Term Reliability Process, as appropriate."[39]

B. System & Resource Outlook

The NYISO's biennial CARIS Phase 1 study will be renamed the System & Resource Outlook, which the NYISO proposes to define as follows:

> System & Resource Outlook: The biennial report that the ISO produces pursuant to Section 31.3.1 of this Attachment Y by which it summarizes the current

[38] The NYISO conducts its Reliability Planning Process on a biennial basis. OATT § 31.1.8.2. The NYISO conducts a Short-Term Assessment of Reliability study for its Short-Term Reliability Process on a quarterly basis. OATT § 38.3.5.1.

[39] The NYISO also proposes a conforming change in OATT § 31.3.1.1 to reference this timing rule in OATT § 31.1.8 for aligning the economic and reliability planning processes.

> assessments, evaluations, and plans in the biennial Comprehensive System Planning Process; produces a twenty-year projection of congestion on the New York State Transmission System; identifies, ranks, and groups congested elements; and assesses the potential benefits of addressing the identified congestion.[40]

As with the existing CARIS Phase 1 study, the NYISO will, in collaboration with its stakeholders and other interested parties, develop the System & Resource Outlook on a biennial basis to identify congestion on the New York State Transmission System and to assess the potential benefits of addressing the congestion. The System & Resource Outlook will be performed in accordance with the current requirements for the CARIS Phase 1 study located in Section 31.3 of Attachment Y, with the enhancements and clarifications described below to provide for a more comprehensive and useful transmission planning study and report.

1. Summary of Economic Planning Process Studies

The NYISO proposes to supplement the transmission system congestion information currently provided in the CARIS Phase 1 Report, which is limited to identifying congestion on the New York State Transmission System and assessing the benefits of addressing this congestion.[41] The System & Resource Outlook will add a comprehensive system-wide summary of the current assessments, evaluations, and plans in the biennial Comprehensive System Planning Process and the information and sources relied upon by the NYISO. This summary will provide a comprehensive snapshot of the New York State Transmission System from reliability, economic, and public policy perspectives. Currently, no single NYISO planning study summarizes and evaluates the totality of New York State's transmission system needs. The NYISO proposes to use the System & Resource Outlook report to help bridge this gap. The report will provide a comprehensive overview of system reliability, economic, and public policy needs, along with the status of current projects and how those projects are progressing to meet the state's transmission needs. By providing additional information and transparency regarding potential needs arising from different components of the Comprehensive System Planning Process, this holistic System & Resource Outlook will assist all interested parties in developing future resources and transmission facilities that will maintain system reliability while implementing the state's climate change protection goals.

2. Twenty-Year Study Period

The NYISO proposes to extend the ten-year study period used in its current CARIS Phase 1 study to a twenty-year study period for the System & Resource Outlook.[42] This extension will enable the NYISO to better capture trends in system congestion and the full benefits of potential transmission upgrades. In addition, this extension is needed to capture the long-term impacts of

---

[40] Proposed revision to OATT § 31.1.1. As the System & Resource Outlook is replacing the CARIS Phase 1 Study, the NYISO also proposes to delete the definition of the term "CARIS" from OATT § 31.1.1.

[41] Proposed revision to OATT §§31.1.4, 31.3.1.1.

[42] Proposed revisions to OATT §§ 31.1.1 (definition of "Study Period"); 31.3.1.1, 31.3.1.3.1.

New York State's 2030 and 2040 mandates included as part of the New York State Climate Leadership and Community Protection Act.

The twenty-year study period for the System & Resource Outlook will align with the existing study period for the NYISO's evaluation of proposed transmission solutions to address congestion in the Economic Transmission Project Evaluation (previously, CARIS Phase 2). This approach will eliminate the current process to extend and align the study periods between the economic planning studies at a later date, saving significant time and resources. With this alignment, the NYISO proposes to delete the tariff language providing for extending the CARIS Phase 1 database for purposes of studying proposed economic transmission projects in CARIS Phase 2. Specifically, OATT Section 31.5.4.3.1 currently states that: "The ISO, in conjunction with the ESPWG, will develop methodologies for extending the most recently completed CARIS database as necessary to evaluate the benefits and costs of each proposed [Regulated Economic Transmission Project] RETP." In language addressing how the NYISO currently evaluates beneficiaries of proposed projects over a ten-year period commencing with the commercial operation date of the projects, OATT Section 31.5.4.4.1 states that "The ISO, in conjunction with the ESPWG, will develop methodologies for extending the most recently completed CARIS database as necessary for this purpose." Given that the System & Resource Outlook will be conducted over a twenty-year study period, this language providing for extending the prior ten-year databases and evaluations is no longer needed, and the NYISO proposes to delete it from the OATT.

Finally, the NYISO proposes to establish that the first year of the twenty-year study period will be the first or the second year of the current biennial Comprehensive System Planning Process, as determined by the NYISO in coordination with stakeholders.[43] This approach will provide the NYISO and its stakeholders with flexibility with regard to the start date of the study. This flexibility improves the Economic Planning Process by providing that the System & Resource Outlook will be based on the most current reliability planning study from the Reliability Planning Process and the Short-Term Reliability Process, and will use the most recent transmission system changes, resource additions, and load forecasts.

3. Identification of Congestion and Assessment of Benefits to Address Congestion

The NYISO's biennial CARIS Phase 1 study currently identifies the top three congested transmission paths and assesses the benefits of generic solutions addressing this congestion. The NYISO first identifies, ranks, and groups the most congested elements on the BPTFs.[44] The NYISO then performs studies for the top three congested elements.[45] The NYISO identifies these top three congested elements through a constraint relaxation process that identifies the highest, potential production cost savings. The NYISO develops four generic solution types (*i.e.*, transmission, generation, demand response, and energy efficiency) that are analyzed to determine

[43] Proposed revision to OATT § 31.3.1.3.1.
[44] OATT § 31.3.1.1.
[45] OATT § 31.3.1.1.

their impact on the congested elements.[46] The primary metric for assessing the benefits and costs of each generic solution is projected NYCA-wide production costs savings.[47] The NYISO also uses additional metrics to measure other project benefits for informational purposes.[48] These metrics are compared to generic estimated project costs developed by the NYISO to determine potential benefits on a present-value basis.[49] The NYISO also performs scenario analysis to identify factors that could impact the congestion in the base case.[50]

In their review of the Economic Planning Process, the NYISO and its stakeholders determined that the current methodology for identifying congestion and assessing the benefits of addressing the congestion has certain limitations and would benefit from enhancements that expand the scope of the analysis and insights provided by the study. First, the current approach concerns only the top three congested transmission paths. This approach has limited the NYISO to recurring reassessment of a limited set of the most congested paths that recur across planning cycles.

The approach also limits the NYISO from evaluating, as part of its regular biennial study, other congested transmission paths including those with a lower production cost impact but potentially higher benefit-to-cost ratios. For example, as part of its 2019 CARIS Phase 1 Study, the NYISO evaluated a scenario based on the New York State policies set forth in the 2019 Climate Leadership and Community Protection Act, which mandates that 70 percent of New York State's end-use energy be generated by renewable energy systems by 2030 ("70x30"). Much of the transmission congestion identified in the 70x30 scenario resulted from local transmission constraints, which would likely not be identified in the top three most congested paths on the New York State Transmission System.[51] The absence of this type of congestion information as a regular component of the CARIS Phase 1 study limits the benefit of the study to assist interested entities in developing solutions to efficiently achieve the state's energy policy goals.

Second, the use of generic solutions to assess the benefits of addressing congestion has not provided value to Market Participants and interested parties commensurate with the time and resources required to perform this analysis. Each generic solution is designed to produce a similar impact on the congested paths, and generic cost assumptions are used to estimate ranges of total project costs. However, without specific solutions in mind, the design and the cost ranges for the generic solutions are often too broad to provide meaningful information to stakeholders. Generally, technologies with better-known cost estimates (*i.e.*, transmission and generation) underperform those with lesser-known cost estimates (*i.e.*, demand response and

---

[46] OATT § 31.3.1.3.3.
[47] OATT § 31.3.1.3.4.
[48] OATT § 31.3.1.3.5.
[49] OATT § 31.3.1.3.5.
[50] OATT § 31.3.1.5.
[51] *See* NYISO 2019 CARIS Report, Section 6 (July 24, 2020) ; *available at:* https://www.nyiso.com/documents/20142/2226108/2019-CARIS-Phase1-Report-Final.pdf/bcf0ab1a-eac2-0cc3-a2d6-6f374309e961

energy efficiency) when comparing benefit-to-cost ratios. The results can be misleading when used to compare the economic effectiveness of each technology. During "lessons learned" discussions with stakeholders, some interested parties informed the NYISO that the generic solution comparisons have limited value in considering whether to propose solutions. Notwithstanding the limited value of this analysis, the NYISO is required to devote significant resources to developing the generic solution costs and comparing their performance across just the three most congested pathways.

The NYISO, therefore, proposes to modify its methodology for identifying and assessing congestion in its System & Resource Outlook. Specifically, the System & Resource Outlook will identify and assess congestion on a statewide basis, rather than being limited to identifying, and assessing generic solutions to address, the top three congested transmission paths.[52] The NYISO will identify statewide congestion by conducting NYCA-wide production cost simulations both with and without the existing constraints on the New York State Transmission System.[53] The NYISO will report the results in the System & Resource Outlook from relaxing individual constraints or groups of constraints. The NYISO will continue to use the additional metrics in its tariffs, including ICAP savings, emission reductions and LBMP savings, for information purposes, to provide additional information in the study concerning congestion and the benefits of addressing the congestion. The revised approach will provide Market Participants, Developers, policymakers, and other interested parties with a complete, comprehensive picture of transmission congestion across the New York State Transmission System. It will also provide more useful information and insights than are currently provided in the CARIS Phase 1 study.

The NYISO proposes to assess generic solutions in its Economic Planning Process where such analysis provides greater value to Market Participants and interested parties. Specifically, the NYISO proposes to relocate its assessment of all types of generic solutions; transmission, generation, demand response and energy efficiency, to the Requested Economic Planning Study and the Economic Transmission Project Evaluation.[54] The Requested Economic Planning Study will allow parties to develop, with the NYISO, a specific study scope concerning the congestion to be assessed and/or proposed solutions to evaluate. At their request, the study will include an analysis of how generic solutions would address that congestion. The tariff will allow Developers to request, in their Economic Transmission Project Evaluation, a comparison of their proposed transmission solution to generic solutions. This comparison will provide guidance to Developers in deciding whether to propose a Regulated Economic Transmission Project. Load Serving Entities may also ask Developers to include such analysis in their project study to inform

[52] Proposed revisions to OATT §§ 31.3.1.1, 31.3.1.3.3, 31.3.1.3.4, 31.3.1.4, and 31.3.2.4 and proposed deletion of § 31.3.1.2.2.

[53] Proposed revisions to OATT § 31.3.1.3.4.

[54] Proposed revisions to OATT § 31.3.2.1; 31.3.3. The relevant Transmission Owner is required to assist the NYISO in developing the generic solution cost estimates to be used by the NYISO in the Economic Transmission Project Evaluation. Proposed revisions to OATT § 31.3.2.1.

their decision whether to approve a transmission project for cost allocation and cost recovery through the NYISO OATT.

The NYISO will also continue to conduct scenario evaluations in the System & Resource Outlook, which provides useful insight on the sensitivity of projected congestion values to differing assumptions included in the base case.[55] Such scenarios include, but are not limited to, addressing different assumptions for load forecast uncertainty, fuel price uncertainty, new resources, retirements, emission data, the cost of emissions allowances and potential requirements imposed by proposed environmental and energy efficiency mandates, as well as overall NYISO resource requirements.[56] For example, as described above, as part of its 2019 CARIS Phase 1 Study, the NYISO developed, in collaboration with stakeholders, and performed a scenario concerning New York State's 70x30 policies set forth in its 2019 Climate Leadership and Community Protection Act.[57] The 70x30 scenario was lauded as highly useful by Developers and policymakers alike in evaluating how system congestion patterns will change over time as the New York State system adds more renewable resources where wind and solar fuel sources are available across the state. This information will help New York State determine how it can achieve the mandate that 70 percent of energy delivered to New York consumers derives from renewable resources by 2030. The NYISO expects to conduct similar scenarios in future rounds of the Economic Planning Process as the state approaches its 2030 and 2040 renewable resource requirements.

4. The NYISO's Revised Methodology for the System & Resource Outlook Complies with the Commission's Order Nos. 890 and 1000 Principles

The NYISO developed the current CARIS Phase 1 study methodology in response to the Order No. 890 economic planning principle that directed transmission providers to account for economic considerations in their transmission planning processes, as well as reliability principles.[58] The Commission stated that the purpose of the economic planning principle is to ensure customers have the opportunity to obtain studies that evaluate potential upgrades or other investments that could reduce congestion or integrate new resources and loads on an aggregated or regional basis.[59] The Commission indicated that customers should be permitted to choose the studies that are of the greatest value to them, directing transmission providers to develop a means

[55] OATT § 31.3.1.5.
[56] OATT § 31.3.1.5.
[57] *See* footnote 51 above.
[58] *See* Order No. 890 at PP 542-551. In Order No. 890, the Commission established nine transmission planning principles that each public utility transmission provider had to address in its planning process: (1) coordination; (2) openness; (3) transparency; (4) information exchange; (5) comparability; (6) dispute resolution; (7) cost allocation; (8) economic planning; and (9) regional participation. See Order No. 890 at PP 444-561. The Commission subsequently required in Order No. 1000, among other things, that each public utility transmission provider participate in a regional transmission planning process that produces a regional transmission plan and that complies with certain transmission planning principles of Order No. 890. Order No. 1000 at P 146. Specifically, Order No. 1000 built on the following transmission planning principles required in Order No. 890: (1) coordination; (openness; (3) transparency; (4) information exchange; (5) comparability; (6) dispute resolution; and (7) economic planning. Order No. 1000 at P 151.
[59] Order No. 890 at PP 543-544.

to allow the transmission provider and stakeholders to cluster or batch requests for economic planning studies so that the transmission provider may perform the studies in the most efficient manner.[60] The Commission required that customers be given the right to request a defined number of high priority studies to address congestion and/or integration of new resource or loads.[61] The Commission accepted the NYISO's existing biennial CARIS Phase 1 study described above as in compliance with this principle.[62]

The NYISO's revised methodology for the System & Resource Outlook continues to comply with the Commission's Order Nos. 890 and 1000 requirements.[63] The revised methodology constitutes a significant expansion of the NYISO's current economic planning study, providing greater amounts of information and insights concerning the New York State Transmission System. While interested parties were previously limited to studies concerning only the top three congested transmission paths, the NYISO, in collaboration with its stakeholders, will now be providing congestion analysis across transmission paths statewide over an expanded twenty-year period, including identifying congested transmission paths with a lower production cost impact but potentially higher benefit-to-cost ratios. This analysis in the System & Resource Outlook will enable Market Participants, Developers, policymakers, and other interested parties to identify economic opportunities statewide to alleviate congestion and to relieve or avoid resource curtailment, and will provide valuable insights concerning where to invest in new resources and transmission in New York State. In addition, as described in Part IV.B.5 below, the NYISO is expanding its scenario options to provide additional opportunities for the NYISO and interested parties to assess the impact of different variables on the New York State Transmission System over the expanded twenty-year time horizon.

The addition of statewide analysis will also enhance the NYISO's analysis of the benefits of interregional transmission projects to alleviate congestion. Based on past CARIS studies, interregional congestion has not risen to the top three most congested paths in order for it to be analyzed. By expanding the scope of the congested elements analyzed in the System & Resource Outlook, the NYISO would increase transparency regarding congestion that occurs on interregional ties. This type of analysis could better inform stakeholders of potential high value interregional projects.

Further, the NYISO will use its NYCA-wide production cost metric for purposes of identifying congestion statewide and will continue to use additional metrics to provide additional information concerning congestion and the benefit of addressing the congestion. As described in

---

[60] *Id.,* at P 546.
[61] *Id.,* at P 547.
[62] *See* footnote 7 above.
[63] The NYISO proposed its current methodology for the CARIS Phase 1 Study in response to the Order No. 890 transmission planning principles as part of its Order No. 890 compliance filing. Accordingly, the NYISO describes in this filing letter how the modifications to its methodology for the CARIS Phase 1 (now System & Resource Outlook) complies with the Order Nos. 890 and 1000 requirements. The remainder of the proposed modifications in this filing constitute enhancements and clarifications within the existing structure and methodologies previously accepted by the Commission as complying with the Order Nos. 890 and 1000 requirements, along with non-substantive study name changes and clean-ups.

Part IV.B.5 below, this includes the adoption of a new energy deliverability metric for information purposes that will provide additional insight into the deliverability of energy from resources onto the New York State Transmission System and the extent of current and expected curtailment of existing and new resources.[64] Finally, interested parties continue to have the opportunity to enter into Requested Economic Planning Studies for the NYISO to study additional scenarios and variations identified by the requested party. Stakeholders have expressed a strong interest in making these studies available, and the NYISO has updated and added the study request form and *pro forma* study agreement into its tariff to facilitate them. All of these enhancements for the System & Resource Outlook collectively expand upon the NYISO's current CARIS Phase 1 study, which has a more limited study scope, exceeding the scope of the studies required by the economic planning principle.

Finally, the NYISO's proposed revisions for the System & Resource Outlook will continue to comply with the Commission's Order No. 890 comparability principle that requires the NYISO to treat resources on a comparable basis.[65] As described above, the NYISO's current approach of using generic solution types in its CARIS Phase 1 study to assess the benefits of addressing congestion is limited to only three congestion transmission paths. That analysis simply compares generic project designs and cost estimates to the identified congestion, rather than providing comparisons of different solutions types to conceptual or actual proposed projects. During the working group process on the tariff revisions, stakeholders informed the NYISO that these generic solutions comparisons were of limited utility in deciding whether to propose projects to relieve transmission congestion. Accordingly, the NYISO is revising its use of generic solutions in the Economic Planning Process, including removing the tariff language concerning the NYISO's current use of generic transmission, generation, demand response and energy efficiency solutions in the CARIS Phase 1 study to consider all resource types on a comparable basis. In the revised Economic Planning Process, the NYISO will continue to treat all resource types comparably. The new System & Resource Outlook will start the Economic Planning Process by providing more extensive information on a technology-neutral basis to all interested parties concerning congestion across the New York system. This broader study will identify the benefits of addressing such congestion statewide, providing valuable insights to Developers concerning optimal locations for the development of all types of solutions. In Requested Economic Planning Studies and Economic Transmission Project Evaluations, the NYISO will provide in-depth analysis of the benefits of conceptual and actual projects to relieve congestion. At the request of Developers the NYISO will compare the benefits of all types of generic solutions -- transmission, generation, demand response and energy efficiency -- to such conceptual and actual projects.[66]

---

[64] The energy deliverability metric will not be used to calculate the benefit-cost ratio of a proposed Regulated Economic Transmission Project which, under the current tariff, is determined solely using system net production cost savings.

[65] Order No. 890-A at P 216.

[66] *See* proposed revisions to OATT §§ 31.3.1.1, 31.3.1.3.3, 31.3.1.3.4, 31.3.1.4, and 31.3.2.4.

5. Additional Metrics for Informational Purposes

The NYISO currently uses the additional metrics set forth in Section 31.3.1.3.5 of Attachment Y in its CARIS Phase 1 study to provide stakeholders with additional information concerning the congestion and the benefits of addressing the congestion, for informational purposes only.[67] These metrics are in addition to the NYCA-wide production cost metric and include: reduction in losses, LMBP load costs, generator payments, ICAP costs, Ancillary Services costs, emission costs, and TCC payments. The NYISO proposes to continue to use these additional metrics, with the revisions described below, for information purposes in the System & Resource Outlook.

The NYISO proposes to clarify that it may, but is not required to, evaluate these metrics in future economic planning studies.[68] As described in Section 31.3.1.3.5, the NYISO will work with the ESPWG to determine the most useful metrics for the Economic Planning Process cycle, given the limits of the NYISO's resources. In addition, the NYISO proposes to clarify that, as with the NYCA-wide production cost metric, it will apply the applicable additional metrics by measuring the difference between the Economic Planning Process base case system value and a system value when the congestion is relieved.

The NYISO also proposes to insert in Section 31.3.1.3.5.7 a new informational metric concerning energy deliverability.[69] Renewable generation projects are often limited by natural resource availability and siting constraints and tend to concentrate in certain geographic areas where bulk transmission facility expansion will be required in order to transfer power for load consumption. In New York, these locations tend to be in the northern and western regions of New York State, and off the coasts of New York City and Long Island.

Traditional system upgrade analysis only examines temporal snapshots of system conditions, [70] and must be supplemented to properly assess temporal issues that should drive the extensive buildout expected in the next few decades. Using production cost simulation tools, an 8,760-hour assessment can be performed to look into the amount of energy that can actually be produced and consumed over a period of time, rather than being curtailed due to transmission limitations for a snapshot in time. This energy deliverability metric will include quantification of the energy projected to be produced by each resource considering the impact of applicable local, statewide, and interregional transmission constraints as compared to the total amount of energy that such resource is capable of producing in the absence of transmission constraints, and

---

[67] OATT § 31.3.1.3.5

[68] Proposed revision to OATT § 31.3.1.3.5

[69] Proposed revision to OATT § 31.3.1.3.5.7.

[70] The NYISO's interconnection procedures require a Developer to meet the NYISO Minimum Interconnection Standard to ensure reliable access to the New York State Transmission System or Distribution System and to obtain the Energy Resource Interconnection Service required to interconnect. The NYISO will identify in interconnection studies any System Upgrade Facilities that are required for the Developer to reliably interconnect in a manner that meets the NYISO Minimum Interconnection Standard. The NYISO Minimum Interconnection Standard does not impose any deliverability test or deliverability requirement on the proposed project. OATT § 25.2.1.1

accounting for fuel availability of each resource type including wind, solar, and water. The metric will also include quantification of the collective impact of resources on energy deliverability at constrained locations, and provide information about the capability remaining on the transmission system to support deliverability of energy from resources as applicable. The metric may be expressed as a percentage of such total amount of energy or as the amount of curtailed energy.

Resources can be reported in groupings (*e.g.,* within constrained renewable generation pockets) or individually to the appropriate stakeholders. Energy deliverability results will be provided in the System & Resource Outlook, and individual stakeholders can also request energy deliverability analysis of their current or planned resource additions via a Requested Economic Planning Study.[71]

The NYISO applied this new energy deliverability concept in its 2019 CARIS Phase 1 70x30 scenario to determine the curtailment of projected renewable resource levels in 2030.[72] Policymakers and stakeholders appreciated that work and are already utilizing the results in selecting renewable resource projects to invest in or approve for renewable energy credit contracts.

Further, the NYISO proposes to revise the current informational ICAP cost metric set forth in Section 31.3.1.3.5.6. The current methodology requires the calculation of two specific ICAP cost variants, which use the latest capacity market clearing prices and demand curve information. Neither of these methodologies align with the NYISO's installed reserve requirement and locational capacity requirement methodologies. The current ICAP cost methodology for CARIS is specific to the Economic Planning Process and cannot be used in the calculation of benefit-to-cost ratios. This methodology is outdated, and was widely criticized by stakeholders during the NYISO's "lessons learned" process on its Economic Planning Process. The methodology also does not align with the installed reserve margin and locational capacity requirement methodologies that the NYISO uses for its ICAP market requirements, which capture the dynamic nature of system topology changes on installed reserve margin and locational capacity requirement metrics. The NYISO, therefore, proposes to replace the current methodology with a requirement that the NYISO will determine the metric in accordance with its procedures and in consultation with stakeholders. Where it is practicable, the NYISO will calculate the metric consistent with the tools and methodology prescribed in Section 5.11.4 of the Services Tariff for calculating the minimum locational capacity requirements. The revised approach will align the metric with how the NYISO sets ICAP requirements and how the NYISO's capacity markets fulfill capacity needs. The NYISO has successfully used this approach in administering the ICAP metric for its Public Policy Transmission Planning Process.[73]

---

[71] Proposed OATT §§ 31.3.1.3.5.7 and 31.3.3.
[72] *See* footnote 51 above.
[73] OATT § 31.4.8.1.10.

The NYISO further proposes to amend OATT Section 31.3.1.3.5.3 to state that the NYISO "may" rather than "will" include payments for Ancillary Services in the generator payments metric. The reason for this change is that the GE MAPS modeling software is not currently capable of co-optimization of Energy and Ancillary Services markets. The NYISO intends to enhance its production cost modeling capabilities in the future to include such payments. The tariff language change will authorize the NYISO to include payments for Ancillary Service in the generator payments metric when it is capable of doing so.[74]

6. Application of System & Resource Outlook to New York State Transmission System

The New York State Transmission System includes the entire New York State electric transmission system, which includes both bulk and non-bulk transmission facilities.[75] For the Comprehensive System Planning Process, the NYISO performs regional transmission planning for the BPTF portion[76] of the New York State Transmission System,[77] while the New York Transmission Owners primarily perform transmission planning for their individual local systems.[78]

The NYISO proposes to clarify that the System & Resource Outlook will identify congestion on the New York State Transmission System, rather than simply identifying congestion on the BPTFs.[79] This clarification is consistent with the NYISO's existing approach, which is to analyze congestion on all transmission facilities, and not just the BPTFs. Analyzing congestion on the entire transmission system, and not just the BPTFs, provides the most accurate calculation of the benefit of relieving transmission. The NYISO further clarifies that it will coordinate with the New York Transmission Owners in the development of the System & Resource Outlook for the non-bulk portions of the New York State Transmission System.[80]

The NYISO does not propose to modify the allocation of responsibilities in the Economic Planning Process among the NYISO and the New York Transmission Owners concerning transmission planning for the New York State Transmission System. As described in Part IV.D below, the NYISO will only evaluate in its Economic Planning Process transmission solutions

---

[74] Proposed revision to OATT § 31.3.1.3.5.3.

[75] OATT § 1.14 ("New York State Transmission System ("NYS Transmission System"), defined as "The entire New York State electric transmission system, which includes: (1) the Transmission Facilities Under ISO Operational Control; (2) the Transmission Facilities Requiring ISO Notification; and (3) all remaining transmission facilities within the NYCA."

[76] OATT § 31.1.1 ("New York State Bulk Power Transmission Facilities ("BPTFs"), defined as "The facilities identified as the New York State Bulk Power Transmission Facilities in the annual Area Transmission Review submitted to NPCC by the ISO pursuant to NPCC requirements."

[77] *See* OATT § 31.1.2.2 (providing that Reliability Planning Process concerns planning to meet Reliability Needs on the BPTFs), § 31.1.5 (providing that Public Policy Transmission Planning Process concerns planning process to consider Public Policy Requirements that drive the need for expansions or upgrades to BPTFs).

[78] *See* OATT § 31.1.3.

[79] Proposed revisions to OATT § 31.1.4, 31.3.1.1.

[80] Proposed revisions to OATT §§ 31.1.4, 31.3.1.1.

that propose to address congestion on the BPTFs.[81] In addition, the NYISO clarifies that it will incorporate Transmission Owners' Local Transmission Owner Plans in its Economic Planning Process.[82]

These proposed clarifications are consistent with the NYISO's current practice for its Economic Planning Process and reflect the existing allocation of responsibilities among the NYISO and the New York Transmission Owners.

7. Other Proposed Amendments

The NYISO proposes to revise the requirements in Section 31.3.1.3.2 of Attachment Y to the OATT for the base case to be used for the System & Resource Outlook to account for both the recent inclusion of a new Short-Term Reliability Process and for the twenty-year study period, which is longer than the study period for the Reliability Planning Process and Short-Term Reliability Process. As revised, the NYISO will assume a reliable system though the study period covered by the most recent Reliability Planning Process and Short-Term Reliability Process. If any Reliability Needs in this study period are unresolved, the NYISO will incorporate sufficient compensatory MWs to resolve those needs. The NYISO will not be required to project Reliability Needs or compensatory MWs for the remainder of the twenty-year study period for the Economic Planning Process. However, the NYISO may adjust load and resources in the base case and/or scenarios as determined in the NYISO's procedures and in consultation with stakeholders.

The NYISO also proposes to revise Section 31.3.1.4 of Attachment Y to include "state policies and related agreements, procurements, and credits" as data input for the development of the System & Resource Outlook. This addition will allow the NYISO to reflect in its economic planning studies and models the values of Renewable Energy Credits ("RECs"), Offshore Renewable Energy Credits ("ORECs"), and direct procurements provided to developers of renewable resources by the New York State Energy Research and Development Authority ("NYSERDA"), the New York Power Authority ("NYPA"), and the Long Island Power Authority ("LIPA").

Section 31.3.1.5 of Attachment Y details the types of scenarios that the NYISO and its stakeholders may develop for the System & Resource Outlook, and provides for the possibility of additional scenarios. The NYISO proposes to revise Section 31.3.1.5 to include for consideration among the scenarios, modeling the impact of "federal, state, and local policies and regulations." The assumptions used in the baseline analysis are generally aligned with those used in the Reliability Planning Process. They include future generation and transmission projects that are sufficiently advanced in their development to be considered as firm as a starting point for analysis. To provide more insight into the rapidly changing energy industry, the NYISO's proposed addition to the list of the specified scenarios will make explicit that the NYISO and its stakeholders may conduct scenarios in the System & Resource Outlook to

[81] *See* proposed revisions to OATT §§ 31.3.2.1, 31.5.4.1.
[82] Proposed revisions to OATT §§ 31.1.4, 31.3.1.1.

examine the impacts of federal, state, and local policies on system and resource planning in New York State. In the 2019 CARIS Phase 1 Study, the NYISO conducted extensive economic congestion and energy deliverability analysis of integrating sufficient renewable resources into the New York State Transmission System to achieve 70 percent renewable energy by 2030.[83] The NYISO's 70x30 scenario was well received by Developers and policymakers as an illustration of future system resource additions and transmission system needs that addresses system congestion and avoids curtailments of these renewable resource additions.[84] The expanded scenario analyses will enable the NYISO to capture system congestion and energy deliverability impacts, and the related economic transmission needs not only in the Economic Planning Process, but also for consideration in the NYISO's other planning processes. In particular, policymakers and developers have informed the NYISO that economic scenario analysis is informative to the Public Policy Transmission Planning Process. State policy targets being addressed in that process include the integration of 3,000 MW of storage, 6,000 MW of utility-level solar photovoltaic resources, and 9,000 MW of offshore wind generation.[85]

Finally, the NYISO has renumbered Sections 31.3.2 – 31.3.2.3 concerning the stakeholder and Board review of the System & Resource Outlook to Sections 31.3.1.8 and 31.3.1.9, respectively, so that all of the System & Resource Outlook related provisions are included under the same Section 31.3.1 heading. This renumbering also distinguishes these System & Resource Outlook requirements from the tariff provisions applicable to the Economic Transmission Project Evaluation (*i.e.*, Section 31.3.2).

C. Requested Economic Planning Study

The NYISO's Additional CARIS Study will be renamed the Requested Economic Planning Study, which the NYISO proposes to define in Section 31.1.1 of Attachment Y to the OATT as follows:

> Requested Economic Planning Study: A study performed solely for information purposes by the ISO pursuant to Section 31.3.3 of this Attachment Y at the request of a Market Participant or other interested party at their expense, the scope and deliverables of which are agreed upon by the ISO and the requesting entity.[86]

The NYISO's requirements to perform an existing Additional CARIS Study are currently set forth in Sections 31.3.1.2.3 and 31.3.1.2.4 of the OATT. The specific requirements are detailed in the NYISO's procedures in its Economic Planning Process Manual, along with a request form and a *pro forma* study agreement.[87] The NYISO proposes to incorporate the study requirements for the Additional CARIS Study (now Requested Economic Planning Study) from the Economic Planning Process Manual into a new Section 31.3.3 of the OATT as described

[83] *See* footnote 51 above.
[84] *See* footnote 51 above.
[85] *See* footnote 36 above.
[86] Proposed revisions to OATT § 31.1.1.
[87] Proposed OATT § 31.3.2.4.

below,[88] and to include the request form and *pro forma* study agreement in new Sections 31.13 and 31.14 of Attachment Y, respectively.

The Requested Economic Planning Study is a stand-alone study, separate from the System & Resource Outlook and other NYISO planning, interconnection, and transmission expansion studies, that a Market Participant or other interested party may request that the NYISO perform at the requesting party's expense to address a study scope and deliverables developed between the NYISO and the requesting party.[89] The NYISO may perform such studies at any time subject to its resource limitations.[90] The requesting party must provide a completed request form, which form is included in Section 31.13 of Attachment Y to the OATT,[91] and provide a study deposit of $25,000.[92]

Following the NYISO's receipt of the completed request form, the NYISO will hold a scoping meeting with the requesting party to determine the study scope and deliverables, such as: (i) additional metrics for measuring congestion and the benefits of relieving that congestion; (ii) additional scenarios and the assumptions to be used; (iii) whether the requesting party wants the NYISO to analyze potential transmission, generation, demand response and/or energy efficiency solutions and the characteristics of those solutions; and (iv) the degree of certainty requested for the solution cost estimates.[93] The NYISO will memorialize the scope and deliverables, described below, in the *pro forma* study agreement, which agreement is included in Section 31.14[94] of Attachment Y, and will provide the study agreement to the requesting party and a non-binding estimate of the total study costs.[95] The NYISO will only commence the study following the requesting party's execution of the study agreement and its provision of any additional

---

[88] The NYISO proposes to delete the current high-level requirements for the additional study in OATT §§ 31.3.1.2.3 and 31.3.1.2.4, which will be replaced by the more detailed requirements in OATT § 31.3.3.

[89] Proposed OATT § 31.3.3.1.

[90] Proposed OATT § 31.3.3.1. The NYISO will process request forms on a first come, first served basis, but is not required to complete the studies in the order the request forms are received. Proposed OATT § 31.3.3.3.

[91] The Requested Economic Planning Study Request Form in OATT§ 31.13 of Attachment Y mirrors the requirements concerning requesting a study described in OATT § 31.3.3 of Attachment Y.

[92] Proposed OATT § 31.3.3.2. The requesting party will have to submit separate requests and study deposits for requests that involve significant differences in scope and assumptions. *Id.* The NYISO may also, with requesting parties' agreement, conduct consolidated studies where there is overlap and allocate the costs equally to the parties. Proposed OATT § 31.3.3.3.

[93] Proposed OATT § 31.3.3.4. The NYISO will post on its website regarding a submitted request form: (i) a general description of the requested study, (ii) the date the NYISO received the request form, and (iii) the identity of the requesting party. Proposed OATT § 31.3.3.2.

[94] The Requested Economic Planning Study Agreement in OATT § 31.14 of Attachment Y mirrors the requirements concerning the performance and payment for the Requested Economic Planning Study described in OATT§ 31.3.3 of Attachment Y and includes placeholders to detail the study scope and deliverables. The miscellaneous provisions in the agreement are consistent with such provisions in the NYISO's other *pro forma* study agreements. *See, e.g.*, OATT § 31.12 (Study Agreement for Evaluation of Public Policy Transmission Projects; OATT § 30.14, Appx 2 (Class Year Study Agreement).

[95] Proposed OATT § 31.3.3.5.

security deposit required by the NYISO.[96] The NYISO will hold study deposit(s) provided by the requesting party in an interest-bearing account for which the interest earned will be associated with the requesting party.[97]

The NYISO will use the database and base case assumptions in the scope agreed upon with the requesting party to perform the Requested Economic Planning Study. The NYISO will use reasonable efforts to complete the study by a date mutually agreed to with the requesting party and, if it cannot meet this date, will promptly inform the requesting party and provide an updated estimate of the completion date.[98]

The NYISO will invoice the requesting party monthly for the study costs that the NYISO incurs in performing the Requested Economic Planning Study, including the costs incurred by the NYISO to use contractors or consultants, computing services, and costs that Transmission Owners may incur to supply study related data at the NYISO's request.[99] The requesting party must pay the invoiced amount within thirty days.[100] The NYISO will retain the full amount of the study deposit(s) submitted by the requesting party until the settlement of the final invoice, but may draw on this deposit if the requesting party does not pay its monthly invoice or does not pay a disputed amount into an independent escrow account.[101] If the NYISO is required to draw on the deposit, the requesting party must restore the full study deposit amount within thirty days.[102]

The NYISO will issue a final invoice to the requesting party upon (i) the completion of the Requested Economic Planning Study or the withdrawal of the requesting party's request form, and (ii) the NYISO's receipt of all final invoices from its consultants and contractors, computing services, and involved Transmission Owners.[103] Upon the NYISO's receipt of the requesting party's final payment for all outstanding invoiced amounts, the NYISO will refund to the requestor (i) its study deposit(s) submitted to the NYISO, less any amount that the NYISO

---

[96] Proposed OATT § 31.3.3.5. The NYISO may, at its discretion, request that the requesting party provide an additional study deposit to cover the total study cost estimate and to cover any study costs estimate increases based on any modifications to the study proposed by the requesting party. *Id.*

[97] Proposed OATT § 31.3.3.5. The Commission has previously accepted the NYISO's use of interest actually earned on a deposit, rather than interest incurred at the Commission's rate, in its transmission planning process requirements. *See* OATT §§ 31.2.6.2, 31.4.4.4; *see also New York Indep. Sys. Operator, Inc*., 166 FERC ¶ 61,099 (2019) (accepting the revisions to the interest rate to interest actually earned in transmission planning process requirements).

[98] Proposed OATT § 31.3.3.6.

[99] Proposed OATT §§ 31.3.3.7 and 31.3.3.8. The NYISO will track its staff and administrative costs that it incurs in performing the study and will include on the monthly invoice a description and an accounting of the study costs incurred by the NYISO, estimated consultant and contractor costs, estimated computing services costs, and estimated costs incurred by Transmission Owners. *Id.*

[100] Proposed OATT § 31.3.3.8.

[101] *Id.* In the event of a dispute, the requesting party shall timely pay undisputed amounts to the NYISO and pay the disputed portion into an independent escrow account. Proposed OATT § 31.3.3.9. Disputes will be address pursuant to the dispute resolution provisions in the NYISO Tariffs. *Id.*

[102] *Id.*

[103] *Id.*

was required to draw upon to satisfy prior invoiced amounts, and (ii) any interests earned on the net study deposit amount held by the NYISO.[104]

Upon the completion of a Requested Economic Planning Study, the NYISO will provide the agreed upon deliverables to the requesting party and will schedule a meeting with the requesting party to review the study results.[105] The NYISO will maintain the results of the study as Confidential Information, but will post the results of the study if and when: (i) the requesting party requests that the NYISO post such results, (ii) the NYISO is informed that the results have been made public, or (iii) the requesting party seeks regulated cost recovery for a Regulated Economic Transmission Project under the NYISO OATT based upon the results of the Requested Economic Planning Study.[106]

The requesting party may withdraw its request form at any time by written notice to the NYISO, in which case the NYISO will immediately terminate further study work except as needed to wrap up work and return information to the requesting party.[107] In addition, if the requesting party fails to make payments, the NYISO may halt its performance of the study.[108] If the requesting party has withdrawn its request form prior to the completion of the study, the NYISO will forward to the requesting party the results of any study work, related to the deliverables, completed prior to the withdrawal date following the requesting party's final payment.[109]

D. Economic Transmission Project Evaluation

The NYISO's CARIS Phase 2 study will be renamed the Economic Transmission Project Evaluation, which the NYISO proposes to define in Attachment 31.1 of the OATT as follows:

> Economic Transmission Project Evaluation: The evaluation by the ISO of a Regulated Economic Transmission Project pursuant to Sections 31.3.2 and 31.5.4 of this Attachment Y.

The NYISO further proposes to define Regulated Economic Transmission Project, which is not currently a defined term in the Definitions section of Attachment Y, as follows:

> Regulated Economic Transmission Project ("RETP"): A transmission project or a portfolio of transmission projects proposed by Developer(s) to address constraint(s) on the BPTFs identified in the Economic Planning Process, which

---

[104] *Id.*

[105] Proposed OATT § 31.3.3.10. The NYISO will remove any Confidential Information or aggregate or mask such information to avoid disclosure of Confidential Information prior to providing the study results to the requesting party.

[106] Proposed OATT § 31.3.3.10. In the latter case, the NYISO will note in such posting whether the database and base case assumptions used in the study are different from the study assumptions that are required for seeking regulated cost recovery under the Economic Transmission Project Evaluation.

[107] Proposed OATT § 31.3.3.6.

[108] Proposed OATT § 31.3.3.8.

[109] Proposed OATT § 31.3.3.10.

transmission project(s) are evaluated in the Economic Transmission Project Evaluation and are eligible for cost allocation and cost recovery under the ISO OATT if approved by a vote of the project's Load Serving Entity beneficiaries pursuant to Section 31.5.4 of this Attachment Y.

Consistent with its current Economic Planning Process requirements, a Developer may continue to propose a Regulated Economic Transmission Project to address congestion identified in the Economic Planning Process and, if it meets the thresholds in the tariff and obtains approval of Load Serving Entities, may obtain cost allocation and cost recovery through the NYISO OATT. If a Developer proposes a Regulated Economic Transmission Project, the NYISO will evaluate the project proposal in the Economic Transmission Project Evaluation. The NYISO will perform the Economic Transmission Project Evaluation in accordance with the same requirements in Sections 31.3 and 31.5.4 of Attachment Y to the OATT that it currently performs in the CARIS Phase 2 study, with limited revisions described below. The NYISO is not proposing to substantially modify the process by which it evaluates proposed Regulated Economic Transmission Project and is not proposing any changes to its process for identifying Load Serving Entities that benefit from the project or the 80 percent voting threshold required for Load Serving Entities to approve such project.

First, the NYISO proposes to clarify throughout its Economic Planning Process tariff provisions that a Regulated Economic Transmission Project must address constraint(s) on the New York State BPTFs identified in the Economic Planning Process.[110] As described in Part IV.A.6 above, the Economic Planning Process identifies and assesses congestion on the entire New York State Transmission System, which includes both the BPTFs and local transmission facilities.[111] For purposes of submitting a transmission project for eligibility for cost allocation and recovery through the NYISO OATT, a Developer's Regulated Economic Transmission Project must address constraint(s) on the BPTFs. This language clarifies that the NYISO will follow the existing allocation of planning responsibilities to the NYISO, by which the NYISO addresses economic and other needs that arise on or related to planning for the BPTFs. The New York Transmission Owners continue to plan for needs related to their local transmission systems, including congestion relief, through the Local Transmission Planning Process.[112]

Second, as described in Part IV.B.3 above, the NYISO proposes that, as part of the Economic Transmission Project Evaluation, it may provide for informational purposes, benefit/cost analysis and other analysis of potential generic solutions to the identified congestion.[113] The NYISO proposes to relocate from OATT Section 31.3.1.4 to Section 31.3.2.1, the current requirement that the relevant Transmission Owner is required to assist the

[110] The NYISO replaced language throughout its tariffs concerning "reducing congestion" with "addressing constraints on the BPTFs."

[111] The New York State Transmission System is defined in the OATT as "The entire New York State electric transmission system, which includes: (1) the Transmission Facilities Under ISO Operational Control; (2) the Transmission Facilities Requiring ISO Notification; and (3) all remaining transmission facilities within the NYCA." OATT § 1.14.

[112] OATT §§ 31.1.3, 31.2.1.

[113] Proposed revisions to OATT § 31.3.2.1.

NYISO in developing the generic solution cost estimates for the NYISO's use in this analysis.[114] This change will place all of the relevant tariff language in the same location.

Third, the NYISO proposes changes to the additional, informational metrics in OATT Section 31.5.4 that it calculates as part of its benefits and costs analysis of proposed Regulated Economic Transmission Projects to align these additional informational metrics with the changes to the additional informational metrics in OATT Section 31.3.1.3.5 used in its System & Resource Outlook, which are described in Part IV.A.5 above.[115]

Fourth, as described in Part IV.A.2 above, the NYISO proposes revisions to OATT Sections 31.5.4.3.1 and 31.5.4.4.1 to delete language concerning extending the ten-year database for CARIS Phase 1 to twenty-years for purposes of studying proposed economic transmission projects in CARIS Phase 2, as the NYISO will now be using a twenty-year study period in its System & Resource Outlook.

Finally, the NYISO has revised Section 31.3.2.4 (now Section 31.3.2) to more clearly indicate the Economic Transmission Project Evaluation requirements within Section 31.3. As revised, the Economic Transmission Project Evaluation requirements are located in Section 31.3.2, while the System & Resource Outlook requirements are set forth in Section 31.3.1 and the Requested Economic Planning Study requirements are set forth in Section 31.3.3.

E. Miscellaneous Revisions

To accommodate the above revisions, the NYISO has adjusted section numbering and cross-references in various places in the OATT. In addition, the NYISO proposes to make the following clarifications, conforming changes, and clean-up revisions in the OATT and Services Tariff:

- Replace throughout OATT Sections 31.1, 31.3, and 31.5 the existing defined terms for the Economic Planning Process with the updated defined terms described in the filing letter (*i.e.*, Economic Planning Process, System & Resource Outlook, Requested Economic Planning Study, Economic Transmission Project Evaluation, and Regulated Economic Transmission Project);

- Make conforming changes throughout the OATT and Services Tariff to accommodate the new defined terms, including in Services Tariff Section 30.4.6.8.4 and OATT Sections 6.10.1.1, 6.10.3.1, 22.6.1, 25.5.5.1, 25.7.12.3.3, 31.2.1.3, 31.7 (Appendix A), and 31.7 (Appendix B);

- Revise OATT Sections 31.3.1.3.3, 31.3.1.3.6, and 31.5.4.1 to correct reference to the regulated transmission projects proposed in the Reliability Planning Process, removing outdated language concerning "alternative" and "backstop";

---

[114] Proposed revisions to OATT §§ 31.3.2.1, 31.3.1.4.
[115] Proposed revisions to OATT § 31.5.4.3.6.

- Revise reference in OATT Section 31.3.1.3.3 to the Comprehensive Reliability Plan ("CRP") with references to the Reliability Planning Process or the Short-Term Reliability Process;

- Delete the words "resource integration" in several locations, as such terminology is superfluous because the NYISO's Economic Planning Process will evaluate the impacts of integrating all resource types on system production costs and energy deliverability; and

- Revise the preamble to the Definitions section of Attachment Y in Section 31.1.1 to clarify that the definitions defined in that section apply to all of Attachment Y, except as such terms are otherwise defined in Attachment Y.

V. PROPOSED EFFECTIVE DATE

The NYISO respectfully requests that the Commission accept the proposed tariff revisions for filing with an effective date of April 11, 2021, which is the day immediately following the end of the statutory sixty-day notice period for this filing.

VI. STAKEHOLDER APPROVAL

The tariff revisions proposed in this filing were discussed with stakeholders at multiple ESPWG and TPAS meetings between August and December 2020. At its December 9, 2020 meeting, the Business Issues Committee approved the tariff changes, unanimously with no abstentions. On December 16, 2020, the Management Committee approved and recommended the NYISO Board of Directors' approval of the tariff changes unanimously with no abstentions. At its January 11, 2021 meeting, the Board of Directors approved the NYISO making this tariff filing under Section 205 of the Federal Power Act.

VII. SERVICE

This filing will be posted on the NYISO's website at www.nyiso.com. In addition, the NYISO will e-mail an electronic link to this filing to each of its customers, to each participant on its stakeholder committees, to the New York Public Service Commission, and to the New Jersey Board of Public Utilities. The NYISO will also make a paper copy available to any interested party that requests one.

VIII. CONCLUSION

Wherefore, for the foregoing reasons, the New York Independent System Operator, Inc. respectfully requests that the Commission accept the proposed changes identified in the filing for its Economic Planning Process with an effective date of April 11, 2021.

Respectfully Submitted,

/s/ Carl F. Patka
Carl F. Patka
Assistant General Counsel
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, New York 12144
(518) 356-6220
cpatka@nyiso.com

cc:

Jignasa Gadani	Jette Gebhart
Leanne Khammal	Kurt Longo
John C. Miller	David Morenoff
Larry Parkinson	Douglas Roe
Frank Swigonski	Eric Vandenberg
Gary Will	